ECONOMIC ASSESSMENT OF NATIONAL HISTORIC CANALS 1984-85

Evaluation & Analysis Division
Socio-Economic Branch
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SUMMARY

In 1984-85 Parks spent nearly $33 million to operate and maintain the heritage canal system. Spending by canal visitors was estimated at around $11 million. Therefore, about $44 million was expended in 1984-85 which can be attributable to the heritage canal system.

The economic impacts resulting from this $44 million expenditure can be estimated using Statistics Canada's national input-output model. These impacts are summarized below:

ESTIMATES OF THE ECONOMIC IMPACT OF HERITAGE CANALS

	Impacts Attributable to: Parks	Visitors	TOTAL
Labour Income Generated	$33.62 M	$ 9.44 M	$43.06 M
Gross Domestic Product	$48.91 M	$15.94 M	$64.85 M
Number of Person-Years	1766	746	2512
Government Revenue			
Direct taxes	$11.00 M	$ 3.50 M	$14.50 M
Indirect taxes, etc.	$ 6.52 M	$ 2.41 M	$ 8.93 M
Parks' revenue collected	$ 0.71 M	$ 0.25 M	$ 0.96 M
TOTAL	$18.23 M	$ 6.16 M	$24.39 M

Labour income (wages, salaries and other supplementary income) generated by the $44 million expenditure is thus estimated at around $43 million. This includes the direct, indirect and induced effects. Another way of viewing it is that for every dollar expended by Parks and canal visitors, nearly $1 in labour income is generated.

Employment impact resulting from the expenditures is estimated at about 2,500 person-years. Nearly 30% of these person-years are attributable to expenditures made by canal visitors.

Finally, government revenue in the form of direct and indirect taxes, duties, royalties, etc. is estimated at over $23 million. Parks also collect about $960 thousand in revenue through the sale of permits, etc. Adding this

figure to the $23 million collected by all governments in the form of taxes and duties, government revenue is estimated at over $24 million. Therefore, it could be said that governments (federal, provincial, municipal) get back in revenue $1 for every $1.37 expended by Parks ($33 million expended versus $24 million in revenue).

It should be noted that the above estimates do not include private sector expenditures on facilities used by canal visitors, equipment purchases of canal visitors or the expenditures of other government departments such as the Department of Public Works. Including these other "secondary" type expenditures would undoubtedly increase the stated impacts. Further, the "primary" benefits that the regulating of water levels have on land values, cottages and businesses is not considered as this would require a study outside the scope of the present analysis.

The estimates presented are considered to be conservative especially in determining the impact derived from visitor expenditures.

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INTRODUCTION

The purpose of this report is to evaluate the impact on the Canadian economy of Parks' canal expenditures and visitor spending attributable to Parks' canal locations. The report uses [1] the Statistics Canada national input-output model. The following results demonstrate that the Canal Programs' economic impact complements Parks' mandate "To protect for all time those places which are significant examples of Canada's natural and cultural heritage and also to encourage public understanding, appreciation and enjoyment of this heritage in ways which leave it unimpaired for future generations." (Parks Canada Policy 1983, p. 11).

The impact on the Canadian economy of spending attributable to Parks canals for the 1984-85 fiscal year is estimated by using Statistics Canada's 1981 structural model. This impact is analyzed in terms of employment, labour income, gross domestic product and government revenue. Chapter I examines spending attributable to national historic canals. It identifies the expenditures injected into the Canadian economy by both Parks and visitors to the canal system. Chapter II discusses the impact on income. The three types of income analyzed are labour income, gross domestic product and total income. Chapter III examines the economic repercussions of Parks' canals on employment. Chapter IV discusses how Parks' canals affect government revenue. Finally, Chapter V examines the contribution of the canal system to the tourism industry.

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1 The basic hypothesis and the method employed are not explained in this report. Those interested may refer to Evaluation of the Impact on the Canadian Economy of Spending Attributable to National Heritage Locations Administered by Parks Canada, Volumes I, II, III and IV, Parks Canada, Socio-Economic Division, April 1983.

CHAPTER I

SPENDING ATTRIBUTABLE TO NATIONAL HISTORIC CANALS

The impact of Parks' canals on the Canadian economy results from 1) canal program expenditures and 2) spending by visitors that is directly attributable to these heritage locations. Canal system expenditures are obtained from Parks' financial records. The estimate of visitor spending, on the other hand, is the end result of applying two successive models. The first model, developed by the Socio-Economic Branch (SEB), uses attendance data; the second is Tourism Canada's Tourism Impact Model (TIM).

The economic impact of these expenditures is measured with the aid of the Statistics Canada's national input-output model of the Canadian economy. This model makes it possible to see how demand is generated in the Canadian economy and how it affects income, employment and government revenue.

1.1 Parks' Canal Expenditures

Financial records to June 30, 1985 show that during the 1984-85 fiscal year, Parks spent some $23.3 million on the historic canals. Moreover, capital spending done by regional offices on canals amounted to $9.5 million. Thus, total Parks spending related to canals was $32.8 million in 1984-85.[2] These expenditures are broken down as follows: Ontario historic canals - $24.8 million; Quebec historic canals - $5.8 million; Nova Scotia historic canal - $2.2 million.

Expenditures for land acquisition and used goods must be excluded from this figure for economic impact estimating purposes. Expenditures for these items add nothing to the Canadian economy because they are simply transfers of property (and thus requiring no output) between two economic agents. From the $32.8 million of Parks' canal expenditures, the $714 thousand revenue collected from the operation of Parks' physical assets must also be subtracted. These include revenue from concessions, leasing of land, sale of licences and other sales. Expenditures that have an economic impact therefore total $32.1 million. Figure 1(a) illustrates this transaction.

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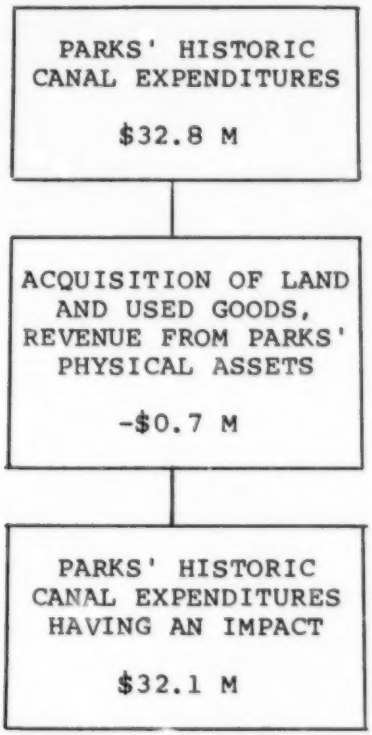
2 The O&M expenditures that might be made by regional offices for canals or the expenditures made by headquarters for canals are not included in this figure.

FIGURE 1(a)

Parks' Canal Related Expenditures Having An Economic Impact


PARKS' HISTORIC CANAL EXPENDITURES
$32.8 M
ACQUISITION OF LAND AND USED GOODS, REVENUE FROM PARKS' PHYSICAL ASSETS
-$0.7 M
PARKS' HISTORIC CANAL EXPENDITURES HAVING AN IMPACT
$32.1 M

1.2 Visitor Spending

In 1984-85, an estimated 4.8 million land based visits were made to national historic canal locations while 366.9 thousand boats passed through the locks. Expenditures made in getting to and during the visit at these locations fall primarily into five economic sectors: 1) transportation, 2) accommodation, 3) food and beverages, 4) entertainment and recreation, and 5) other trip costs.

The transportation sector includes all vehicle maintenance services, purchases of goods (including gasoline) and all other modes of transportation used by tourists. In 1984-85, visitors spent $1.4 million in this sector. Visitors also spent an estimated $6.6 million on accommodation and an estimated $1.3 million on food and beverages.

The entertainment and recreation sector includes theatre and movies, various types of trips and entertainment and other recreational services. Canal visitors spent just over $1.1 million in this sector during 1984-85. The "other trip costs" sector consists of: retail sales, taxis, personal services, car rentals and travel agents. Visitor spending in this sector totalled $1.1 million in 1984-85.[3]

Combining the five expenditure sectors, it was estimated that visitors spent a total of $11.5 million in 1984-85 broken down as follows: Ontario historic canals - $9.6 million; Quebec historic canals - $1.8 million; Nova Scotia historic canal - $0.1 million.

Part of the visitor spending (lock permits and licences, sales of maps and charts, etc.) represents revenue to Parks. The amount involved, which totals $248.8 thousand, must be deducted from the $11.5 million figure if we are to derive the amount of spending that has an impact on the Canadian economy. Visitor spending having an economic impact, therefore, totals approximately $11.3 million, as illustrated in Figure 1(b). It is assumed here that without the existence of Parks' historic canals, the visitors would not have spent the $11.5 million.

1.3 Final Domestic Demand

The analysis thus far shows that Parks injected a net $32.1 million into the economy and that visitors to historic canals spent an additional $11.3 million. The total estimated final demand in the economy is therefore $43.4 million. Final demand is defined as the demand which is in fact actually generated in the economy.

Of this $43.4 million in final demand, $1.6 million are accounted for as goods imported from abroad by visitors and Parks, as import duties on these goods and as indirect taxes. These three components represent an outflow from the economy. In fact the Statistics Canada model used considers

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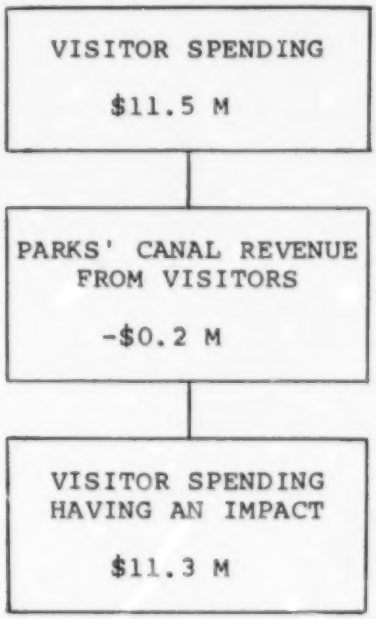
3 For further information about the method used to estimate visitor spending: Evaluation of the Impact on the Canadian Economy of Spending Attributable to National Heritage Locations Administered by Parks Canada, Volume II, April 1983. Visitor expenditures are estimates and considered conservative.

FIGURE 1(b)

Visitor Spending Having An Economic Impact



amounts spent on imported goods and government revenue as not being reintroduced into the economy and therefore having no economic impact.

Subtracting these three components from the final demand estimate leads to the more restricted concept of final domestic demand. As one might expect, final domestic demand refers to the amount remaining within our country and which leads to the production of Canadian goods and services. In 1984-85, final domestic demand totalled $41.8 million. It is this amount which is used to evaluate the economic impact of the Parks' canal system.

Figure 1(c) summarizes the process thus far, while Figure 1(d) illustrates the inferences that may be drawn from final domestic demand. Each of the elements in Figure 1(d) will be analyzed separately.

FIGURE 1(c)

Final Domestic Demand Attributable To
Parks Historic Canals

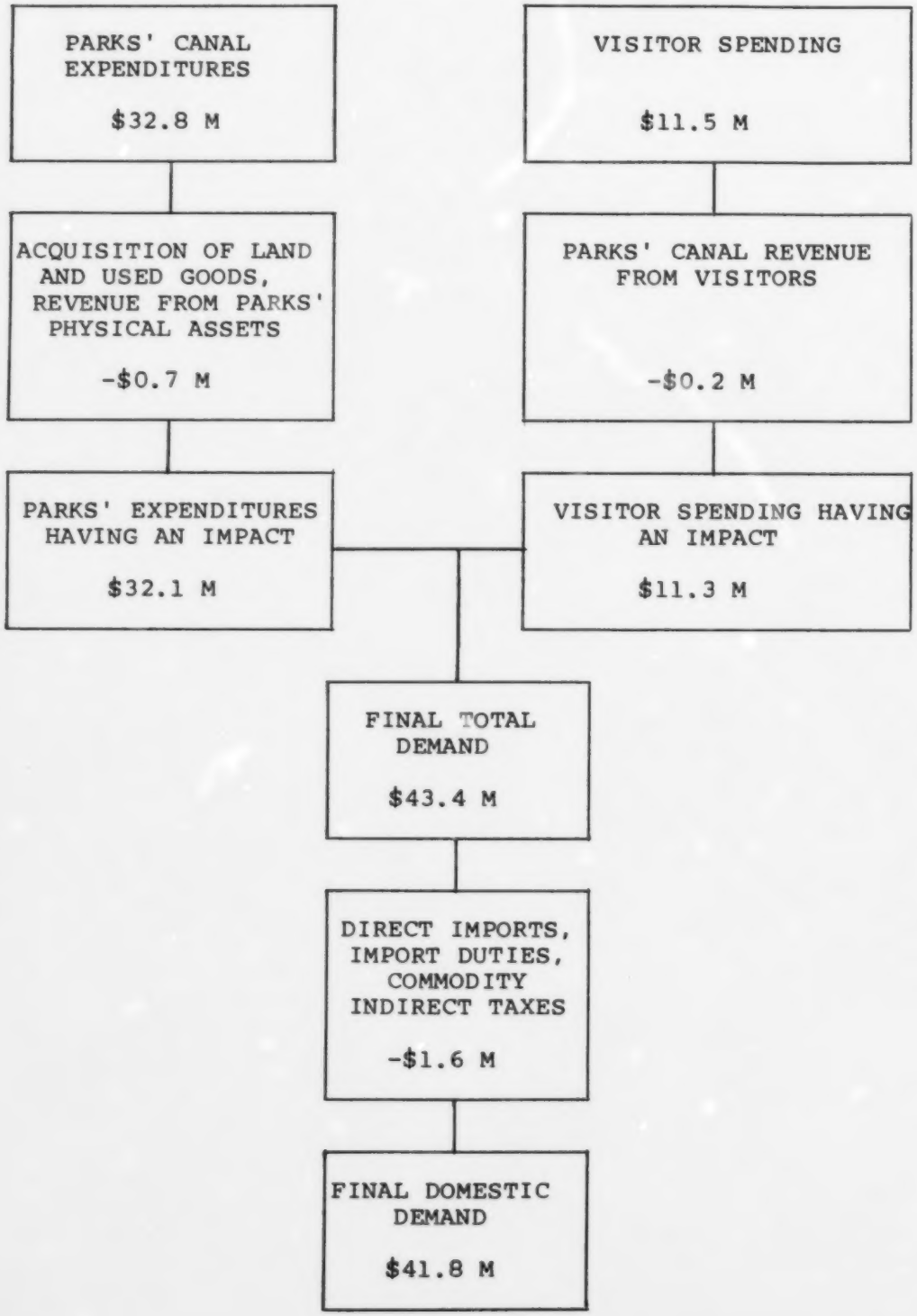


FIGURE 1(d)

Components Involved In Economic Impact Of Parks' Canal Program

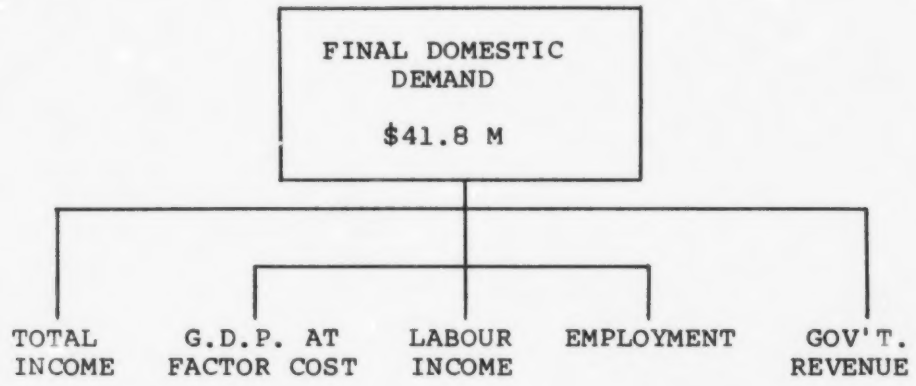


Table 1 depicts the final domestic demand generated in the economy by industry sector. The primary industry categories include the extraction of natural resources (agriculture, mining, etc.); the secondary sector involves the processing industries (textiles, furniture, machinery, etc.); the construction sector includes all types of construction (buildings, roads, dams, etc.); the tertiary sector consists of service industries (transportation, communication, business, etc.).

Table 1 shows the strong predominance of the tertiary sector in final domestic demand analysis. The transportation sector, $2.7 million, and accommodation and restaurants, $7.5 million, together represent 67% of all final demand directed to the tertiary sector. In terms of source of demand, it is worth noting that over 98%, or $10.9 million, of all visitor spending is in the tertiary sector. This is not surprising since most businesses involved in the tourism industry are in the tertiary sector. By contrast, Parks spends $4.2 million in this sector, or 23% of its industrial demand. Much more important is the $11.9 million of final demand for the construction sector, made by the canal program. This demand represents more than 65% of the industrial demand of the canal program. Moreover, Parks was responsible for over

TABLE 1

Final Domestic Demand, By Industry Sector

Industry Sector	Parks $ 000	Visitors $ 000	Total $ 000
Primary	99	135	234
Secondary	1,949	7	1,956
Construction	11,895	4	11,899
Tertiary	4,235	10,936	15,171
- Transportation & warehousing	1,638	1,084	2,722
- Communication	286	12	298
- Retail & trade	213	1,121	1,334
- Finance, insurance, real estate	60	12	72
- Accommodation & restaurants	4	7,499	7,503
- Services to business	1,313	30	1,343
- Other	721	1,178	1,899
Sub-total	**18,178**	**11,082**	**29,260**
Households			
- Salaries and wages paid by Parks	12,562	-	12,562
Total	**30,741**	**11,082**	**41,823**

99% of the final domestic demand for the construction sector in Table 1. Domestic industrial demand, however, accounts for 65% of Parks' total generated domestic demand. The balance of the demand goes towards households, (i.e. Parks' canal employees) who received $12.6 million in salaries, wages and other labour income. This "sector" is second in importance in terms of final demand.

CHAPTER II

IMPACT ON INCOME

Final domestic demand generates many different types of income. The types of income analyzed in this chapter are labour income, gross domestic product and total income.

2.1 Labour Income

As the name indicates, labour income consists of the total pay earned by wage-earners (i.e. salaries, wages and other supplementary labour income). Table 2 shows, by industry sector, the labour income generated by the final domestic demand of visitors and Parks. The total labour income generated amounts to $43.1 million.

The tertiary sector, in paying $18.5 million to its employees, produces more labour income than any other industry sector. Together, the retail, trade, accommodation and restaurants sub-sectors represent 40% of the impact on the tertiary sector. Table 2 also shows that wages and salaries paid by Parks, representing nearly 30% of total labour income, form an important part of this income generation.

Visitor spending generates some $9.4 million in income while canal expenditures generate $33.6 million. The difference is accounted for by employee salaries and wages paid by Parks and Parks much larger contribution to the secondary and construction sectors of the economy.

2.2 Gross Domestic Product

If the net income of individual businesses and other surpluses[4] are added to labour income, the resulting figure is the gross domestic product at factor cost.

Gross domestic product (GDP) is the value of the net output of intermediary inputs (i.e. the value added to the total goods and services produced in Canada).

Value added may be measured in terms of market price or factor cost. The GDP at market price indicates the total value added to goods and services. It is equal to the income generated by production and thus includes indirect taxes and subsidies. GDP at factor cost is the value added in relation

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4 Corporation profits, dividends paid to persons, capital cost allowance and depletion (mines and other extraction industries).

TABLE 2

Labour Income Generated, By Industry Sector

Industry Sector	Parks $ 000	Visitors $ 000	Total $ 000
Primary	470	228	678
Secondary	4,241	1,275	5,516
Construction	4,220	149	4,369
Tertiary	11,016	7,458	18,474
- Transportation & warehousing	1,530	875	2,405
- Communication	837	312	1,149
- Retail & trade	2,268	1,264	3,532
- Finance, insurance, real estate	1,844	708	2,552
- Accommodation & restaurants	814	3,059	3,873
- Services to business	1,528	272	1,800
- Other	2,195	968	3,163
Sub-total	**19,947**	**9,110**	**29,057**
Households	13,674	333	14,007
- Salaries and wages paid by Parks	12,562	-	12,562
- Other labour income	1,112	333	1,445
Total	**33,621**	**9,443**	**43,064**

to the factors of production: labour, material used, and capital. This index, therefore, excludes all indirect taxes. By eliminating the components that add nothing to the value of production and that go directly to government, the GDP at factor cost gives a more accurate picture of value added in the economy.

Table 3 shows the gross domestic product at factor cost generated in the economy for each industry sector. Thus the $41.8 million in final domestic demand (Table 1) produced by Parks and visitors generated over $64.8 million in value added to the economy. In other words, for each dollar in final demand that is attributable to Parks' canals, $1.55 of gross domestic product is generated in the Canadian economy. Assuming that visitor spending is attributable to Parks' canals, every dollar spent (i.e. having an impact) by Parks increases the value added in the Canadian economy by $2.02.

A close study of Table 3 shows that the tertiary sector, with a GDP of $32.7 million, is the main beneficiary. It should be recalled that most visitor services are in the tertiary sector: restaurants, accommodation, retail and trade, etc. Parks' purchases for professional, financial, transportation and communication services are also important. The tertiary sector is followed by households, with $14.1 million, and the secondary sector, with $8.1 million.

In Table 4, GDP at factor cost is broken down into direct, indirect and induced GDP. This shows that Parks' canal expenditures had direct repercussions in the order of $21.9 million compared to $6.0 million for visitor spending. Direct GDP consists of the increased income resulting from initial spending. Direct GDP for all spending totals $27.9 million, or 43% of total GDP generated.

Indirect GDP is the portion of value added produced in supplying the industries stimulated by initial demand. In effect, when demand increases in a given industry sector, this sector needs to obtain materials and supplies from other industries. In other words, indirect GDP is the value added in the economy in relation to these supply industries. Induced GDP results from an increase in economic activity due to additional spending by households because of their added income. Table 4 shows that indirect and induced GDP total approximately $36.9 million: $27.0 million of this comes from Parks' canal expenditures and $9.9 million from visitor spending.

2.3 Total Income

As explained earlier, GDP at factor cost consists of salaries and wages plus the net earnings of businesses and other surpluses. By adding to the GDP at factor cost both indirect taxes and duties while subtracting subsidies, we obtain the

TABLE 3

Gross Domestic Product At Factor Cost Generated, By Industry Sector

Industry Sector	Parks $ 000	Visitors $ 000	Total $ 000
Primary	2,168	1,161	3,327
Secondary	6,216	1,888	8,104
Construction	6,431	197	6,628
Tertiary	20,336	12,339	32,675
- Transportation & warehousing	2,383	1,152	3,535
- Communication	1,338	493	1,831
- Retail & trade	3,216	1,792	5,008
- Finance, insurance, real estate	5,711	2,018	7,729
- Accommodation & restaurants	1,219	4,582	5,801
- Services to business	2,397	431	2,828
- Other	4,072	1,871	5,943
Sub-total	**35,151**	**15,585**	**50,736**
Households	13,756	358	14,114
- Salaries and wages paid by Parks	12,562	-	12,562
- Other Labour income	1,194	358	1,552
Total	**48,907**	**15,943**	**64,850**

total income generated. Taxes and duties, which are not considered among income directly associated with the production of goods and services, nevertheless remain one of the types of income generated. Subsidies, however, are subtracted from the total since they represent public funds and cause a decrease in net government revenue.

TABLE 4

Direct, Indirect And Induced Gross Domestic Product At Factor Cost Generated

	Parks $ 000	Visitors $ 000	Total $ 000
Direct GDP	21,924	6,048	27,972
Indirect and Induced GDP	26,983	9,895	36,878
Total GDP	**48,907**	**15,943**	**64,850**

Table 5 illustrates the breakdown of total income generated by spending attributable to heritage canals. Parks account for more than 75% of the $71.7 million in total income generated. Here again, the salaries, wages, and supplementary labour income that is generated by canal expenditures are the main reason for this greater percentage impact. They represent around 47% of all revenue generation. Total salaries, wages and supplementary labour income generated by both canals and visitors account for 60% of all income created. Figure 2(a) illustrates the process used to derive total income from labour income.

TABLE 5

Total Income Generated

	Parks $ 000	Visitors $ 000	Total $ 000
Salaries, wages and supplementary labour income	33,621	9,443	43,064
Net income of individual businesses	1,841	1,194	3,035
Other surpluses	13,445	5,306	18,751
Sub-total: GDP at factor cost	**48,907**	**15,943**	**64,850**
Indirect taxes and duties less subsidies	5,119	1,735	6,854
Total	**54,026**	**17,678**	**71,704**

FIGURE 2(a)

Breakdown Of Total Income Generated

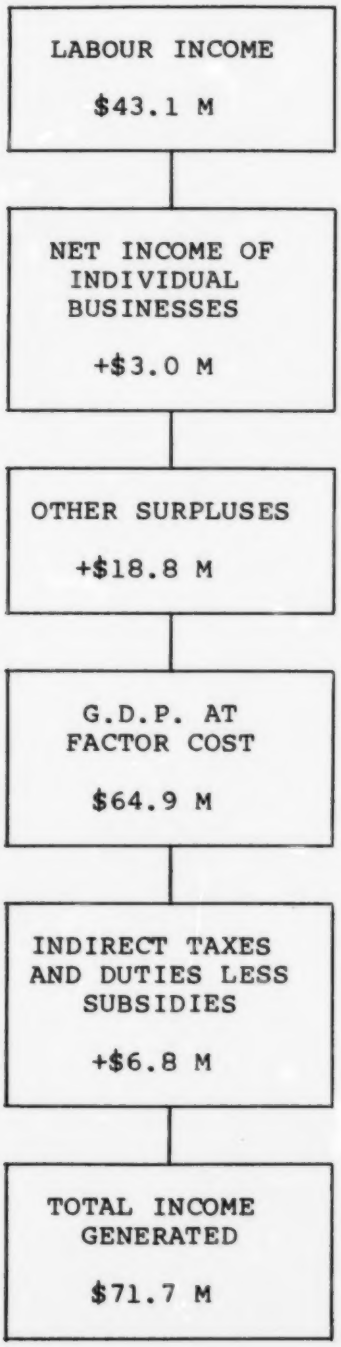
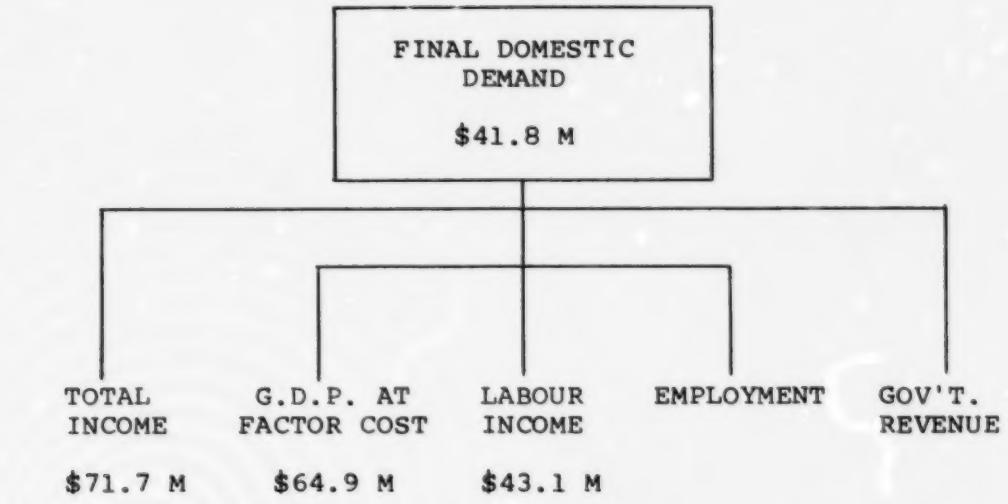


Figure 2(b) summarizes the topics covered thus far.

FIGURE 2(b)

Impact On Income



CHAPTER III

IMPACT ON EMPLOYMENT

Spending by Parks and canal visitors also generates employment opportunities.

Table 6 shows the impact on employment that results from the final domestic demand of $41.8 million (Table 1). It shows that expenditures by Parks and canal visitors generated over 2,500 person-years of work, including the 529 (full-time equivalent) Parks employees. Visitors were responsible for the creation of 746 person-years and Parks 1,766 person-years of employment. Thus Parks' canal expenditures generated more than 70% of all person-years created.

Once again, most of the jobs generated (73% excluding Parks employees) were in the tertiary sector (i.e. 1,357 person-years). This finding is not surprising since we already know that the tertiary sector is highly labour-intensive and that visitors concentrate most of their spending on services from this sector.

Spending related to the existence of the heritage canals therefore has significant repercussions on job creation. Table 7 shows the number of direct, indirect and induced jobs, as well as the total jobs created in person-years. Of the 2,512 jobs created, around 47% are direct when Parks' canal employees are included.

3.1 Labour Income and Employment Impact

In addition to creating more jobs, Parks' canal expenditures also give rise to higher paying jobs. Using the figures for labour income generated and number of jobs created, the annual average salary paid for a job created by visitor spending was an estimated $12,700. The corresponding figure for jobs created by Parks' canal expenditures was $19,000. Visitor and Parks' canal related spending creates a total of 2,512 jobs at an annual average salary of $17,100. Since visitor spending results from the existence of the historic canals, it could be said that the canals create one person-year of employment for every $13,100 worth of expenditures.

TABLE 6

Person-Years Generated By Industry Sector

Industry Sector	Parks	Visitors	Total
Primary	60	41	101
Secondary	194	60	254
Construction	153	6	159
Tertiary	744	613	1,357
- Transportation & warehousing	73	39	112
- Communication	32	12	44
- Retail & trade	224	125	349
- Finance, insurance, real estate	74	28	102
- Accommodation & restaurants	82	308	390
- Services to business	120	20	140
- Other	139	81	220
Sub-total	**1,151**	**720**	**1,871**
Parks canal P.Y.	529	-	529
Other P.Y.	86	26	112
Total	**1,766**	**746**	**2,512**

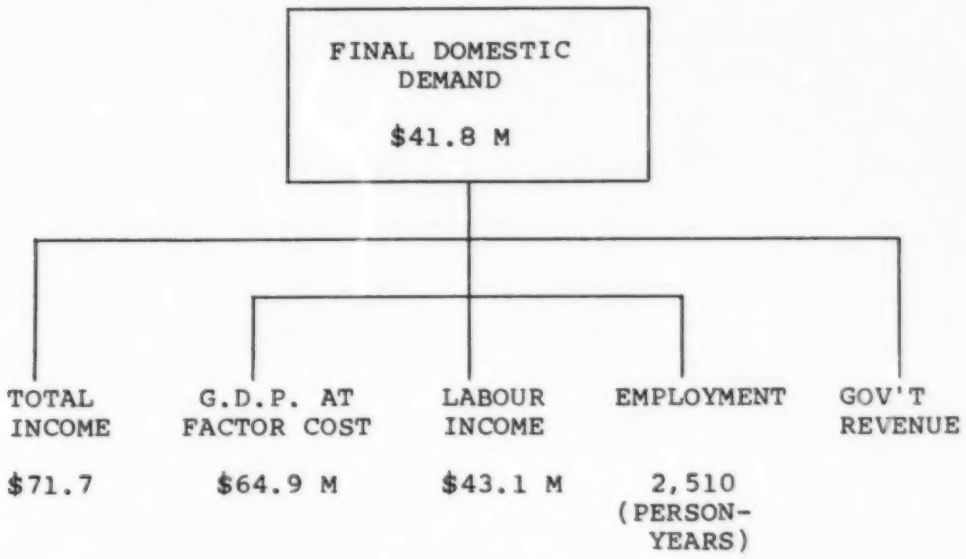
TABLE 7

Number Of Direct, Indirect And Induced Person-Years Generated

	Parks	Visitors	Total
Direct	792	389	1,181
Indirect and Induced	974	357	1,331
Total	**1,766**	**746**	**2,512**

FIGURE 3(a)

Impact On Income And Employment



CHAPTER IV

IMPACT ON GOVERNMENT REVENUE

In addition to the spending of public funds, the canals also generate revenue. Table 8 shows the government revenue generated by the canal system and visitors. Of the $32.8 million in canal program expenditures and the $11.5 million in visitor spending, a total of $24.4 million returns to the various levels of government. $18.2 million (75% of all government revenue) is associated with Parks' canal expenditures and $6.2 million is related to visitor expenditures.

Direct taxes, with $14.5 million, is clearly the most important source of government revenue. It is followed by commodity and non-commodity indirect taxes of $8.0 million. These two forms of tax represent more than 92% of all government revenue. All direct and indirect taxes represent more than 96% of government revenue. Out of each dollar spent under the canal program, government therefore recovers 74 cents.

If we assume that the federal government's share of the tax revenue ($23.4 M in Table 8) is 34%[5], then Canada receives an additional $8.0 million over and above the $963 thousand collected directly through lockage permits, etc. Subtracting these sources of revenue, the canal system cost the federal treasury $23.8 M in 1984-85 ($32.8 M - $8.96 M = $23.8 M).

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5 see Statistics Canada, "System of National Accounts : National Income and Expenditure Accounts", Catalogue 13-201.

TABLE 8

Government Revenue Generated

	Parks $ 000	Visitors $ 000	Total $ 000
Direct taxes*	11,000	3,500	14,500
Indirect commodity taxes	3,825	1,253	5,078
Taxes on natural resources	400	149	549
Government goods and services	996	525	1,521
Import duties	450	121	571
Indirect non-commodity taxes	2,038	901	2,939
Minus subsidies	-1,194	-540	-1,734
Sub-total	**17,515**	**5,909**	**23,424**
Revenue from canals' capital assets, permits, etc.	714	249	963
Total	**18,229**	**6,158**	**24,387**

* Estimated by Parks (DOE)

FIGURE 4(a)

Sources Of Government Revenue

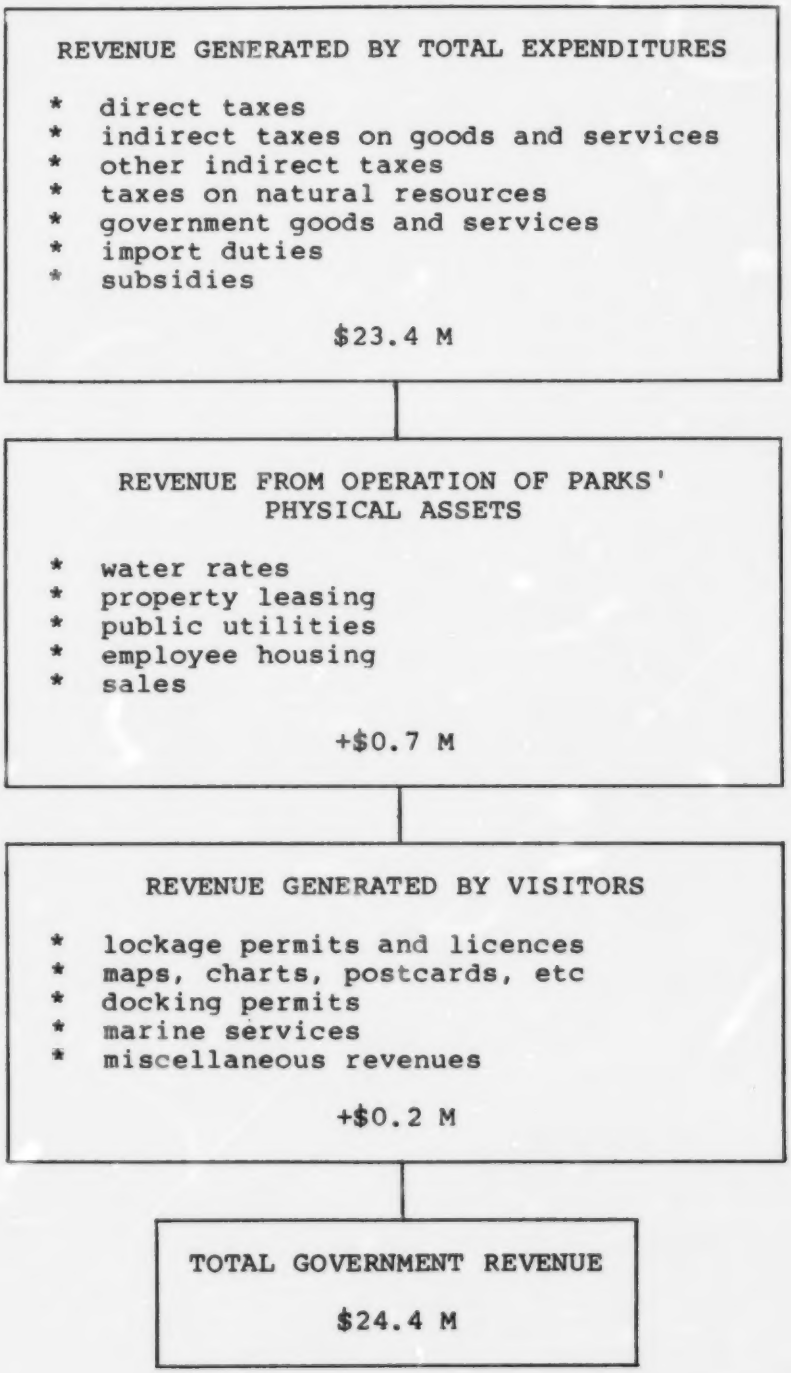
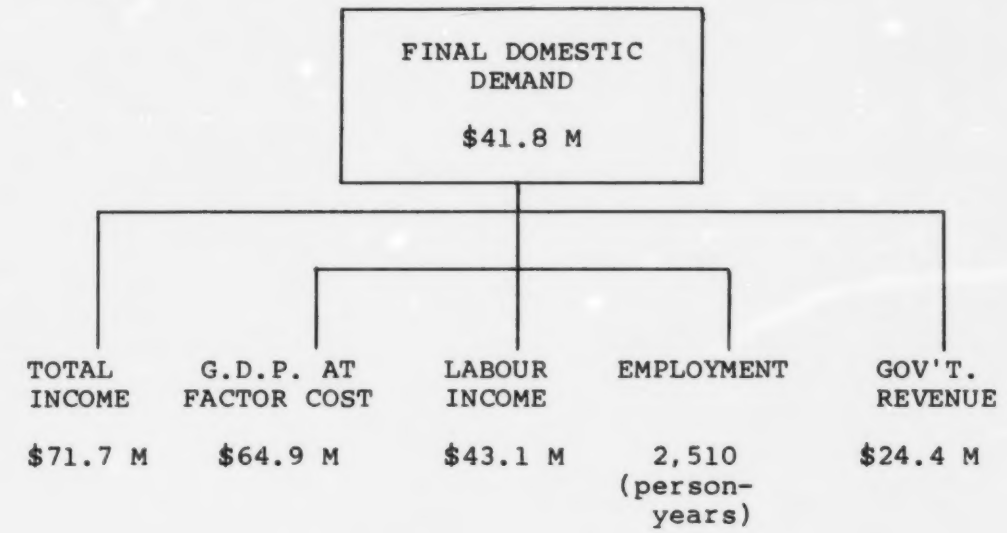


FIGURE 4(b)

Impact On Income, Employment And Government Revenue



CHAPTER V

IMPACT ON TOURISM

The presence of the historic canals also plays an important role in Canada's tourism industry. To evaluate the repercussions of the canal system on tourism in Canada, spending by Canadian and foreign tourists must be considered. A comparison of the $11.5 million in tourism spending attributable to the canals to total tourism spending in Canada in 1983-84 ($18,600 million[6]) shows that around 0.06% of all spending in the Canadian tourism industry is related to the national historic canals system.

Without the presence of the canals, the number of Canadian visitors going abroad would probably have been much greater. By attracting foreign visitors as well as promoting domestic tourism, Parks' historic canals have a positive effect on tourism.

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6 Tourism Canada, 1983-84

CONCLUSION

Although the primary objective of the Parks' canal program is the preservation of these historic canals for the benefit and enjoyment of present and future generations, this report demonstrates that spending attributable to the canals has an important impact on the economy. In fact, whether for gross domestic product, labour income, job creation, government revenue or the favourable effects on tourism in Canada, the economic repercussions of the canals are significant.

Because the figures given in this report are simulation results, some factors that are difficult to take into account were omitted. These include volunteer work, unpaid work, market imperfections and capacity limitations. One must not lose sight of the fact that the figures should be viewed as approximate rather than absolute.

It should also be recognized that the economic impact assessment does not include expenditures made by the private sector to construct facilities used to service visitors. In addition, expenditures made by the visitors on recreation equipment used during their visit to the canals are not accounted for. Finally, the expenditures of other government departments such as the Department of Public Works are likewise not included in the assessment. Obviously including these "secondary" types of expenditures would have increased the impact estimates. Further, estimation of "primary" type benefits, such as the recreational value of canals to visitors or the increased value of land as a result of regulating water levels requires detailed studies not within the scope of this report.

A number of socio-economic questions were also avoided in this study. Thus structural changes arising in a given region around a canal location are not considered. Are the jobs created seasonal or permanent? Do they improve the quality of life? Is there a spill-over effect on local or regional entrepreneurship? Questions such as these are all socio-economic considerations that have been left out of this study. The results included in this report have been analyzed from an economic standpoint, which calls for a factual description of the impact of spending attributable to the canals.

The estimates presented are considered to be conservative especially in determining the impact derived from visitor expenditures.